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ABSTRACT

The instructor's guide provides a review for those preparing to take Part IV of the Certified Professional Secretary (CPS) examination. Course content can also help secretaries update their skills in accounting and business mathematics. Organized into lessons with objectives, content outline, and teaching suggestions and references, the units cover: the account, posting and summarization, the bookkeeping cycle and accounting for cash, and accounting for merchandise and negotiable instruments. Additional topics include payroll procedures, special records, analysis and interpretation of financial statements, cost analysis and forecasting, analyzing and interpreting numerical data, and other tools for presenting and analyzing numerical data. Notes on how secretaries prepare for the CPS examination and a bibliography are included. (NH)

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Part IV in a Series
Preparation for Certified Professional Secretary Examination

Financial Analysis and Mathematics of Business

A Suggested Adult Business Education Course

Instructor's Guide

The University of the State of New York
THE STATE EDUCATION DEPARTMENT
Bureau of Continuing Education Curriculum Development
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1974

CE 002 371

Foreword

The course described in this booklet, *Financial Analysis and the Mathematics of Business*, is intended as a review for those preparing to take Part IV of the Certified Professional Secretary (CPS) examination. Part IV of this examination, which is given by the National Secretaries Association (International), bears the same title as this booklet. This course can also be the basis of a class for those secretaries wishing to update their skills in accounting and business mathematics.

Information about the CPS examination can be obtained from the headquarters office of the Institute for Certifying Secretaries, National Secretaries Association (International), 2440 Pershing Road, Kansas City, Missouri 64108.

Six courses to cover the six parts of the CPS examination were planned by a committee consisting of the following: Marian N. Batten, CPS, secretary to the manager of Nonexempt Compensation and Benefits, General Electric Company, Schenectady; Hobart H. Conover, chief of the Bureau of Business Education; Carla V.R. Delray, CPS, manager of Office Services and Corporate Planning Administration, Mohasco Industries, Amsterdam; Adrian C. Gonyea, dean, School of Business, Hudson Valley Community College, Troy; E. Noah Gould, associate, Bureau of Continuing Curriculum; Florence E. Graham, chairman, Business Education Department, Draper High School, Rotterdam; Margaret A. McKenna, associate professor of business education, State University of New York at Albany; B. Bertha Wakin, professor of business education, State University of New York at Albany; and Eugene Whitney, associate, Bureau of Business Education. Mr. Gould and Mr. Whitney were cochairmen.

This course, *Financial Analysis and the Mathematics of Business*, was written by Mr. Gonyea. Miss Wakin directly supervised the writing and is coordinating the content among the courses in the series. Mr. Gould did the final editing of this manuscript and is in general charge of the series.

HERBERT BOTHAMLEY, *Chief*
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Message to the Instructor

This instructor's guide is intended as an aid in the presentation of a well-organized course. Since it is a review course, those entering it are expected to have a good background in the subject content. Upon completion of the course the students will, we hope, have improved and refined their knowledge of bookkeeping accounts, the bookkeeping cycle, accounting procedures, analysis and interpretation of financial statements, analysis and interpretation of numerical data, and some of the elements of cost analysis and forecasting. They should also be better qualified to take Part IV of the CPS examination.

The content of this booklet is suitable for use in the adult education programs of school districts and of Boards of Cooperative Educational Services (BOCES), and in the instructional programs of the secondary schools and community colleges of New York State. Specific references to pertinent readings and problems are included at the end of each lesson. The instructor may use additional problems, if he wishes. The instructor should be a person with experience in accounting work and in teaching accounting or other business subjects. Well-trained, experienced Certified Professional Secretaries are another possible source of instructors.

The content of this course can generally be covered in 10 sessions of 3 hours each, but this pattern is by no means universal, nor is it mandatory in any sense. For those students who wish to cover some topics in greater depth, the instructor may wish to suggest materials for independent study.

An instructor or administrator who needs help in planning or conducting a course using this publication may contact the Bureau of Business Education.

HOBART H. CONOVER, *Chief*
Bureau of Business Education

ROBERT H. BIELEFELD, *Director*
Division of Occupational Education Instruction

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Lesson 1
The Account

OBJECTIVES

After completing this lesson the student should be able to explain:

How the various types of accounts are classified and the kind of information they contain,

The theory of debits and credits, and

How this theory is used in the day-to-day entering of business transactions in the journals.

CONTENT OUTLINE	TEACHING SUGGESTIONS AND REFERENCES
I. Introduction to the Course	Introduce yourself to the group and have the students introduce themselves. Suggest that each student give his name, employment information, and reason for taking the course.
A. Purpose of the course	Explain that the purpose of the course is to help students improve and update their accounting skills by providing a review of accounts and the basic accounting functions. This is to include: accounting for merchandise, negotiable instruments, payroll procedures, special reports, interpretation of financial statements, cost analysis and forecasting, and numerical data.

B. Textbook and references

Students should have at least one basic accounting text. Several are listed in the bibliography. In addition, urge the students to purchase the Keeling and Pendery book for use with Lesson 5 and for future reference.

Also point out that it is important for the students to keep up with current information by reading the monthly *Survey of Current Business*.

II. The Account

A. Classification of accounts

The instructor should make certain that the student understands the following terminology. It is basic to further study.

1. Assets

An asset is something you own. Each type of asset has an account of its own in which you record the value of that asset. For example: The cash that a business owns is an asset to the business and the amount owned is recorded in an account entitled *Cash*. Other examples of asset accounts are *Accounts Receivable*, and *Merchandise Inventory*. Also consider *Equipment*.

2. Liabilities

A liability is something you owe. Each type of liability has an account of its own in which you record the value of the liability. For example: *Accounts Payable* is an account in which you record the amount of money you owe others because you purchased something from them.

3. Proprietorship (Owner's Equity)

These are accounts in which you keep track of the *net worth* of the business. When all transactions are recorded at the end of an accounting period, the total of the Asset accounts minus the total of the Liability accounts should equal the total of the Proprietorship accounts.

a. Capital account

For a sole proprietorship or a partnership there are two types of

proprietorship accounts. One is the *Capital* account. The word *Capital* is usually preceded by the owner's name, for example: Richard Smith, Capital. This account shows the net worth of the business less the amount the owner has drawn out during the period.

b. Drawing account

The other proprietorship account is the *Drawing* account, for example: Richard Smith, Drawing. It shows the amount of cash or other assets withdrawn against anticipated profits.

c. Stock accounts

For a corporation, where the ownership is recorded in terms of stocks, the proprietorship accounts are entitled *Common Stock* or *Preferred Stock*. Earnings of the corporation that have not been paid out to stockholders are recorded in *Retained Earnings*.

d. Permanent and temporary accounts

So far we have talked only about *permanent* or *real accounts*. They are called permanent because they always have a balance, under normal circumstances. There are other types of accounts called *temporary accounts*, which are summarized and closed out at the end of each accounting period.

e. Types of temporary accounts

There are basically two types of temporary accounts, known as *Expense* accounts and *Income* accounts. Examples of Expense accounts are *Rent Expense* and *Salaries*. Examples of Income accounts are *Sales* and *Income from Fees*. When the temporary proprietorship accounts are summarized, the result is either added to or subtracted from the permanent proprietorship accounts.

B. Basic accounting equation

We can express all the previous text in a simple equation, called the basic accounting equation, as follows:

Assets - Liabilities = Proprietorship
(Owner's Equity)

This basic equation could be expanded to show the effects of the temporary accounts mentioned above and expressed as follows:

Assets - Liabilities = Proprietorship + Income - Expense

Assets - Liabilities = Proprietorship

Expense | Income

III. Analysis of Transactions

A. Debit and credit entries

1. Transactions

Business transactions that result in entries are:

1. Receipt or payment of cash, checks, or notes
2. Purchases
3. Sales
4. Issuing or receiving credit memorandums

2. T-Accounts

Introduce the T-Account to illustrate what to do when a transaction results in an increase or decrease in an account. For example:

a. Asset

Asset Accounts	
Dr	Cr
Increases	Decreases

b. Liability

Liability Accounts	
Dr	Cr
Decreases	Increases

c. Proprietorship

Proprietorship Accounts	
Dr	Cr
Decreases	Increases

d. Expense

Expense Accounts	
Dr	Cr
Increases	Decreases

e. Income

Income Accounts	
Dr	Cr
Decreases	Increases

Once the above diagrams are committed to memory, drill the class on recording transactions as follows:

3. Recording of Cash Sales

Transaction 1. Record cash sales of $1,000.

a. Debit and credit

Cash is an asset. When an asset increases, we *debit* the asset account. Cash has increased, so we *debit* the Cash account. Sales is an income account. When income increases, we *credit* the income account. Sales income has increased so we *credit* the Sales account.

4. Recording of rent paid

Transaction 2. Paid rent of $90

a. Debit

Rent is an Expense. When an expense increases, we *debit* the expense account. Rent expense has increased, so we *debit* Rent Expense.

b. Credit

Cash is an Asset. When an asset decreases, we *credit* the asset account. Cash has decreased, so we *credit* the Cash account.

B. Journalizing; General Journal

Journalizing is the day-to-day recording of the transactions of a business. For instructional purposes, we often employ the simple General Journal form. Record the day's cash sales as follows:

April 8	Cash	100	
	Sales		100

1. A prototype entry

Impress upon the students that this is only a prototype of the more sophisticated methods of journalizing in use today. It is still used in a few simple bookkeeping systems. But generally speaking, it has been replaced by specialized journals or even computerized.

*References:**

Gentry, Chaps. 1, 2, 3, and 4.
Meigs, Chaps. 1, 2, and 3.
Niswonger, Chaps. 1 and 2. Prob. 1-3A, p. 26, Instructions (1) and (2); Exer. 2-1, p. 51
Pyle, Chaps. 1 and 2. Prob. 1-2A, p. 24; Exer. 2-1, p. 47.

*Full reference citations are given in the bibliography.

Lesson 2
Posting and Summarization

OBJECTIVES

After completing this lesson the student should be able to:

Explain the use and purpose of the ledgers,

Explain how the information in the ledgers is summarized and adjusted by means of a worksheet, and

Perceive the cyclical nature of bookkeeping.

CONTENT OUTLINE	TEACHING SUGGESTIONS AND REFERENCES
I. General Ledger A. Expansion of T-Accounts	The T-Account was introduced in the previous lesson. Now expand on this with an illustration of an actual General Ledger type of account with columns for date, item, post reference, and amount. Emphasize that the *journals* are the books of *original* entry and the *ledgers* are the books of *final* entry.
II. Posting A. From Journal to Ledger	This is the practice of transferring the information from the journals to the ledgers. Explain the cross-referencing system used in posting, that is, the number of the ledger page to which information is posted from a journal is noted on the page of the journal from which the information is taken, and vice versa.

III. Trial Balance A. List debit and credit balances.	Explain that taking a trial balance requires that a list be made of the debit or credit balance of each account from the General Ledger. Then the total of the debit balances must equal the total of the credit balances.
B. Explain principles of double-entry system.	This is the ideal place to explain the principles of the double-entry accounting system. Although the students have already made double entries, it is at this point that the reason for two entries can best be understood. You should know what procedures to follow to ascertain why a trial balance fails to balance. Then show the students how to make simple correcting entries before the books are closed.
IV. Work Sheets A. Adjusting entries	Limit the adjustment entries introduced to simple types such as depreciation, merchandise inventories, and supplies inventories. Tell the students the amount of annual depreciation to take. You will be teaching the methods of computing depreciation in Lesson 6.
B. Computing Cost of Goods Sold	You should explain how to compute the Cost of Goods Sold now. Also present the entries for closing Expense and Revenue accounts and the Drawing account. In addition, this is a good time to discuss accounting periods such as calendar year, fiscal year, and fiscal period.

*References:**

Gentry, Chaps. 4 and 5.

Meigs, Chaps. 3 and 4.

Niswonger, Chaps. 2 and 3. Prob. 2-4A, p. 56; Prob. 3-3A except Instruction (2), p. 84.

Pyle, Chaps. 2, 3, and 4. Prob. 2-4A, p. 55; Prob. 3-3A except Instruction (3), p. 82; Prob. 4-1A except Instruction (2), p. 110.

*Full reference citations are given in the bibliography.

Lesson 3
The Bookkeeping Cycle and Accounting for Cash

OBJECTIVES

After completing this lesson the student should be able to:
List and explain the steps in the bookkeeping cycle,
Operate Cash Receipts and Cash Disbursements journals,
Manage all cash accounts, and
Reconcile bank statements.

CONTENT OUTLINE	TEACHING SUGGESTIONS AND REFERENCES
I. Financial Statements A. Accounts under Assets, Liabilities, etc.	Introduce the various subclasses of Assets, Liabilities, and Proprietorship accounts at this point. So far, all Assets have been lumped into one group. But now as the accounts are taken off the Worksheet and placed into Balance Sheets, and Income Statements, you should teach the subclasses such as Current Assets, Fixed Assets, and Deferred Charges.
II. The Bookkeeping Cycle A. Trial Balance, opening of new accounts, etc.	You should then cover the Post-Closing Trial Balance, the ruling of accounts, and the opening of accounts for the next fiscal period. Now review the bookkeeping cycle with the students to help them grasp the overall picture of the cycle.

III. Cash Receipts

A. Operation of Journal

The important things to explain here are the opening of a bank account, the making of deposits, and the operation of a Cash Receipts Journal. Also discuss methods of internal control of cash with emphasis on the following three procedures:

B. Internal control of cash

1. All cash received should be deposited promptly.
2. At the end of each day the total of all cash sales slips or cash register tapes should be matched with the cash received that day.
3. The responsibility for control of cash should be assigned to a person other than the one responsible for keeping track of sales.

IV. Cash Disbursements

A. Journal, Check Register, etc.

Now explain the operation of a Cash Disbursements Journal and a Check Register. Also introduce the Combined Cash Journal. Then cover the procedures and journal entries for establishing, replenishing, and reconciling a Petty Cash Fund.

B. Reconciling Bank Statement

Teach the students how to reconcile a Bank Statement and how to make correcting entries in the books.

References:

Gentry, Chaps, 5, 6, and 7.
Meigs, Chaps. 3, 4, 5, and 9.
Niswonger, Chaps, 3, 4, 5, and 11.
Prob. 3-4A, p. 84; Exer. 11-1 p. 288; Exer. 11-6, p. 289.
Pyle, Chaps. 4, 5, 6, 7, and 8.
Prob. 4-2, p. 111; Exers. 8-1, 8-2, 8-3, p. 246.

Lesson 4
Accounting for Merchandise and Negotiable Instruments

OBJECTIVES

After completing this lesson the student should be able to:
Explain how to operate Sales and Purchases Journals and how to gather and organize the information in them,
Compute interest on negotiable instruments, and
Record both interest and negotiable instruments in the proper accounts.

CONTENT OUTLINE	TEACHING SUGGESTIONS AND REFERENCES
I. Sales Journal A. Structure of Journal	Explain the various ways a Sales Journal may be structured and how *charge* sales are recorded in them. Conduct a drill on computing sales discounts and on entering them in the Cash Receipts Journal. At this point, explain that a firm having few sales returns and allowances would record them in the General Journal, but a firm having a lot of them, might keep a separate Sales Returns and Allowances Journal.
II. Purchases Journal A. Steps in a purchase	Present the steps in making a purchase. These include filling out a Purchase Requisition, which generates a Purchase Order, and finally, checking the Purchase Invoice when it is received.

B. Structure of Journal, invoices, trade discounts, etc.	Explain the different ways a Purchases Journal can be structured and how the Purchase Invoices are recorded in them. Now have some drill on computing trade discounts and entering these discounts in the Cash Disbursements Journal. Then explain the entry for recording purchase returns and allowances in the General Journal.
C. Fast review	Review both Sales and Purchases Journals as rapidly as possible, so there will be enough time during the session to cover the rest of the lesson adequately.
III. Negotiable Instruments A. Computing interest	Explain how to compute interest on a promissory note. Review both methods of computation but let the students use either the *60-day, 6%* method or the *cancellation* method, whichever they like. Be sure the students understand the difference between *borrowing* on a note (where the borrower receives the full principal of the note) and *discounting* a note (where the interest is taken out in advance).
B. Borrowing vs. discounting	
C. Entries for borrowing, etc.	Now demonstrate entries for borrowing on a note, discounting a note, accepting a note in payment of a debt, and giving a note in payment of a debt.
D. Notes Receivable Register, etc.	Explain the structure and use of a Notes Receivable Register and a Notes Payable Register. Also give brief explanations of cashier's checks, bank drafts, certified checks, traveler's checks, and trade acceptances.

References:
Gentry, Chaps. 6, 8, and 11.
Meigs, Chaps. 5, 10, and 12.
Niswonger, Chaps. 4, 5, and 7. Prob. 5-4A, p. 135; Exers. 7-2, 7-3, 7-6, p. 179.
Pyle, Chaps. 6 and 9. Prob. 6-1, p. 175; Exers. 9-1, 9-2, 9-3, p. 277.

Lesson 5
Payroll Procedures

OBJECTIVES

Upon completing this lesson the student should be able to:
Compute gross pay and all payroll taxes, and
Record these and other payroll deductions in the payroll records.

CONTENT OUTLINE	TEACHING SUGGESTIONS AND REFERENCES
I. Calculating Gross Pay A. Weekly and biweekly	Explain how to calculate gross pay for both hourly and salaried employees. Explain that salaried employees may be paid weekly, bi-weekly, semi-monthly, or even monthly. Their gross pay for a period is determined by dividing their annual salary by 52 (for weekly pay), or by 26 for bi-weekly.
B. Hourly and overtime	Hourly employees are usually paid weekly; their gross pay is computed by multiplying their hourly rate of pay by the number of hours shown on their time cards. Devote some time to the computation of overtime pay.
II. Payroll Taxes A. FICA	For ease of calculating the Federal Insurance Contributions Act (FICA) tax, you may want to round off the rate to 6% instead of the 5.85% actually in use today. Use the current maximum

	of $13,200 of salary against which the tax is levied.
B. Withholding taxes	For teaching State and Federal withholding taxes, provide the students with copies of withholding tables showing how much to withhold based upon amount of gross pay and number of exemptions claimed. You could use W-2 and W-4 forms here as part of a classroom exercise.
C. Unemployment and disability	Explain and demonstrate how State and Federal unemployment taxes and disability benefits taxes are computed.
D. Remitting tax money	Explain remittance of payroll taxes, including place to submit to and the proper time. Use official forms for this instruction.
III. Payroll Records A. Payroll Summary	Explain the use of the Payroll Summary. It has columns for deductions of payroll taxes paid by the employee, and other employee deductions, such as: health insurance premiums, union dues, payroll savings, and retirement and life insurance plans.
B. Individual Earnings Record	Describe the Individual Earnings Record with emphasis on the assistance it provides in keeping track of the amounts accumulated for each type of deduction. Also explain the entries for recording the items from the payroll, mentioned above.
	References: Gentry, Chap. 8 and Appendix 3. Keeling, Units 2, 3, 4, 5, 6, 9, and 10. Prob. 4, p. 19; Prob. 5, p. 20; Prob. 5, p. 53; Prob. 4, p. 132; Prob. 2, p. 152. Meigs, Chaps. 12 and 17. Niswonger, Chap. 12. Prob. 12-1A, p. 316. Pyle, Chap. 13. Prob. 13-3A, p. 388.

NOTE: Although each of the above publications is adequate for this subject, the teacher might prefer to use Keeling. It contains all the tables, forms, and charts needed, together with blank forms for student practice. Also, it is an invaluable reference for future study and use on the job.

Lesson 6
Special Records

OBJECTIVES

After completing this lesson the student should be able to:

Keep special registers to safeguard noncash assets such as insurance policies and notes receivable,

Enter information on Employee Expense Reporting Sheets in account books,

Maintain inventory records, and

Manage stockholders records and fixed asset records.

CONTENT OUTLINE	TEACHING SUGGESTIONS AND REFERENCES
I. Insurance Register	Explain the structure and use of the Insurance Register and its importance in protecting the assets of the firm.
II. Notes Receivable Register	Point out that the purpose of this register is to keep track of all the details of a note, from the date of acquisition to the date it is paid by the maker. A register should also be kept for Notes Payable, if volume warrants.
III. Employee Expense Reporting Sheets	Mention the entries for recording expenses employees incur on behalf of the company. Discuss reimbursing the employees and the recording of the reimbursement details.
IV. Inventory Records	Explain the difference between a physical inventory and a perpetual inventory, give examples of each, and tell when each is used. In covering

		costing of inventory, limit the discussion to a review of LIFO, FIFO, and average cost.
V.	Stockholders Records A. Sale of stock through underwriter	State that when a firm sells its own stock, the sale is usually made on a subscription basis. If the sale is made through an underwriter, the record-keeping is simply a matter of recording the receipt of the money from the underwriter and who owns the stock.
	B. Sales of stock by company itself	If, however, the company chooses to market its own stock, it must keep additional records. When anyone subscribes for the stock his name is entered in a Subscribers Ledger or a Subscribers List. When the company receives full payment for the stock, it issues stock certificates to evidence the purchaser's ownership. The stock certificates are then sent to the purchaser and recorded in a Stockholders Ledger.
VI.	Fixed Asset Records A. Original cost and depreciation	A firm holding many fixed assets could lose track of their worth if the firm did not keep up-to-date records of the original cost and the amount of depreciation accrued each year. The original cost of an asset, less the total amount of depreciation accrued over the years, is called the book value.
	B. Computing depreciation	Explain the straight line, declining balance, sum-of-the-years-digits, and unit output methods of computing depreciation.
	C. Disposal of fixed assets	Introduce fixed asset records last in this session. Then, if time permits, review the entries for sale and disposal of fixed assets.

References:

Anthony, Chaps. 6, 8, and 9.
Gentry, Chaps. 9, 10, and 12.
Horngren, Chaps. 2 and 5.
Meigs, Chaps. 10, 11, 12, and 13.
Moore, Chaps. 1, 2, and 9.
Niswonger, Chaps. 8, 10, 11, and 16. Prob. 8-1A, p. 204; Exer. 16-4, p. 143. Read pp. 248, 249, 283, 284, and 285.
Pyle, Chaps. 10, 11, 12, and 16. Exer. 10-1, p. 300; Prob. 16-1, p. 462. Read pp. 323 and 324.

Lesson 7
Analysis and Interpretation of Financial Statements

OBJECTIVES

After completing this lesson the student should be able to:
Analyze and interpret Financial Statements,
Compare statements and compute ratios,
Know what the statements and ratios mean, what causes changes in them, and what future actions the changes indicate should be taken.

CONTENT OUTLINE	TEACHING SUGGESTIONS AND REFERENCES
I. Balance Sheets	Explain how to compare the current Balance Sheet with the one of the previous month or the previous year to show growth or shrinkage in the accounts. The Current Assets and Current Liabilities accounts should be analyzed to show the changes in Working Capital.
A. Emphasize effect on Working Capital	It is not necessary to make a formal Statement of Source and Application of Funds, but be sure the students are aware of the effect of changes in noncurrent assets on Working Capital.
B. Analyze Accounts Receivable	Go through an analysis of Accounts Receivable to show how much money is past due and how long it is past due. Then have a discussion of causes.

II.	Income Statements	Explain how to compare the current Income Statement with the one of the previous month or the previous year to show growth or shrinkage in the accounts.
	A. Analysis of Sources of Income	Prepare an analysis of the Sources of Income broken down into Rents, Investments, Interest, and Sales.
	B. Analysis of Sales	Although the information isn't shown in the Financial Statements, you may want to make an analysis of sales by region, or product, or socioeconomic group.
	C. Analysis of Expenses	Analyze expenses to show increases and decreases. Follow this up with a discussion of the reasons for increases and decreases. Are they warranted? How can we adjust them?
III.	Ratios	As you explain how to compute each ratio, conduct a brief discussion on the purpose of each. This discussion should include at least the information below.
	A. Current Ratio	The Current Ratio, which is the ratio of Current Assets to Current Liabilities, measures the ability of a firm to meet its current obligations.
	B. Acid-Test Ratio	The Acid-Test Ratio, which is the ratio of Quick Assets to Current Liabilities, measures the *immediate* ability of a firm to meet its current obligations, (Define *Quick Assets.)*
	C. Ratio of Net Income to Investment Capital	The ratio of Net Income to Investment Capital tells us what percentage of profit the owner is realizing on his investment. Does it compare favorably to other types of investments with equal risk?
	D. Ratio of Net Income to Sales	The ratio of Net Income to Sales tells us the percentage of net profit a company is realizing on sales. Does it compare favorably to other firms in the trade? Should we cut expenses or raise prices?

E. Ratio of Receivables to Sales

The ratio of Receivables to Sales measures the turnover of Accounts Receivable. Does it compare favorably to prior years? Should our collection procedures be accelerated? Are we perhaps losing sales because they are too stringent?

F. Merchandise Turnover rate

The Merchandise Turnover rate tells us the number of times our Merchandise Inventory is turned over or bought and sold each year. Is it too low or about the same as in other similar firms? What risks are we incurring and what opportunities are we missing if it is too low?

G. Other ratios

There are, of course, many more ratios that could be taught if time permits. Emphasize that these ratios are for stockholders, prospective stockholders, creditors, and governmental agencies, as well as tools for top management.

References:

Anthony, Chaps 6, 10, 11, and 12.
Gentry, Chap. 28.
Horngren, Chaps. 2, 3, and 4.
Meigs, Chap. 16.
Moore, Chaps 1, 2, 3, 4, 5, and 6.
Niswonger, Chap. 28. Exers. 28-1, 28-2, p. 745; Exer. 28-3, p. 746.
Pyle, Chap. 26. Prob. 26-1, p. 759, Prob. 26-2, p. 760.

Lesson 8
Cost Analysis and Forecasting

OBJECTIVES

After completing this lesson the student should understand how to:
Accumulate and compute unit costs,
Construct a Breakeven Chart,
Make a Master Budget, and
Draft Forecast Income Statements and Forecast Balance Sheets.

CONTENT OUTLINE	TEACHING SUGGESTIONS AND REFERENCES
I. Cost Analysis	Although cost accounting techniques are applied to all types of business endeavor, they are most meaningful in a manufacturing concern. For this reason you should center your presentation on such a concern.
A. Definitions of cost elements	Give a brief definition of the three elements of cost: direct materials, direct labor, and factory overhead expense. Discuss methods of accumulating these costs in the accounts.
B. Unit cost	Stress the fact that there is no such thing as *a unit cost* because unit costs depend upon volume. Give examples of variable costs and fixed costs. Explain that fixed cost remains the same, per unit, regardless of the number of units produced, while variable cost decreases, per unit, as output increases.

C. Breakeven point

When the students grasp the concept of unit cost, the computation of a breakeven point will become meaningful to them.

D. Breakeven Chart

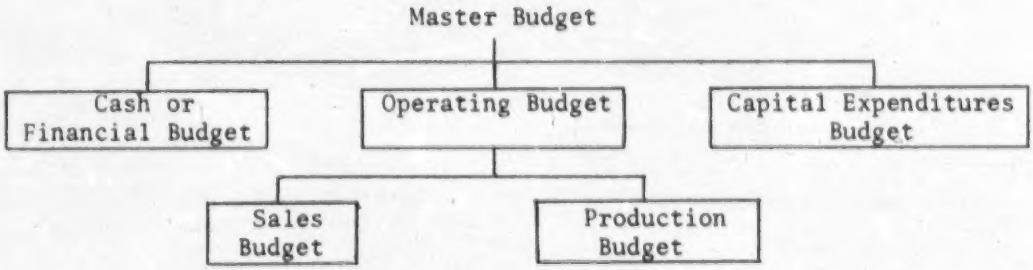
Construct a simple Breakeven Chart with dollars of sales income on the vertical axis and volume of production on the horizontal axis. Then plot curves to show how additional profit could be realized first, by increasing the selling price of a unit, and second, by decreasing the fixed or variable cost of a unit.

II. Forecasting

The cost analysis techniques discussed so far can be used for analyzing past performance and for projecting future performance. Now turn your attention to other devices for predicting the future.

A. Master Budget

The best available tool for forecasting is the Master Budget. Explain that this is a plan for the activities of the business over the next year. Although a Master Budget can be structured in an infinite variety of ways, for this course it is best to concentrate on one type of structure, such as that given below. Explain the purpose of each kind of budget.



B. Steps in making Master Budget

Make sure that the students understand each of the steps in preparing a Master Budget. Typical steps include the following:

1. Establish committee.

- Establish a Budget Committee composed of the top executives in each function of the firm, for example, production and finance. The company president

		usually serves on this committee. The Comptroller or a Budget Director could chair the committee.
	2. Establish time table.	• Establish a timetable for completing each step in the budget process.
	3. Collect expense and income estimates.	• The Budget Director and the committee receive the expense and income estimates from the department heads.
	4. Analyze estimates.	• The Budget Director and the committee analyze the estimates (of Step 3) and return them, with suggested revisions.
	5. Correct the estimates.	• The department heads make the corrections they believe they can operate with and return the estimates to the Budget Director.
	6. Assemble data into Master Budget.	• The Budget Director assembles all the data in a budget and submits it to the committee, together with his comments and suggestions.
	7. Revise, if necessary.	• If the committee fails to accept the budget, the steps must be repeated and revisions made. But if the budget is accepted it becomes a set of guidelines for the next year's activities.
III. Administering Master Budget		Now begins the day-to-day administration of the budget with the Budget Director constantly on guard to see that the estimates are being realized. If it becomes apparent that an estimate is unrealistic, the budget can be amended by action of the Budget Committee.
A. Other factors		It must be understood that this is just one way a budget can be prepared. Frequently, the budget of a business firm must be approved by the board of directors. In a governmental unit, it must always be approved by the legislative body.
IV. Other forecasts		
A. Forecast Income Statement		After covering the budget show how to prepare a Forecast (or Estimated) Income Statement from the budget data.

Explain that this is a summary of the results expected.

B. Forecast Balance Sheet

Also make a Forecast (or Estimated) Balance Sheet showing the net worth of the company at the end of the budget period.

References:

Anthony, Chaps. 13, 15, and 16.
Gentry, Chaps. 18, 23, 27, and 28.
Horngren, Chaps. 6, 7, and 17.
Moore, Chaps. 10, 15, 16, and 17.
Niswonger, Chaps. 21, 22, 25, and 28.
Exer. 21-4, p. 553; Exers. 22-1, 22-2, 22-3, p. 582; Exers. 25-4, 25-5, p. 663.
Pyle, Chaps. 22, 23, 24, 25, and 26.
Exer. 22-4, p. 636; Exers. 24-1, 24-2, p. 701; Exers. 25-4, 25-5, p. 729.

Lesson 9
Analyzing and Interpreting Numerical Data

OBJECTIVES

After completing this lesson the student should know:
How to gather and organize numerical data for analysis,
How to compute measures of central tendency and dispersion,
What an analysis means, and
How to draw conclusions from an analysis.

CONTENT OUTLINE	TEACHING SUGGESTIONS AND REFERENCES
I. Gathering Numerical Data	Before you can begin teaching the analysis and transformation of numerical data, you must first teach the students how to examine and define the problem, and how to select sources of data.
A. Sources of data	These sources could include publications of the Federal Government and of private organizations, and possibly an original survey made by the student.
B. Comparability of data	Devote time to determining whether the various elements are comparable as to content and definitions. Also, watch out for errors due to such things as misleading statements in a questionnaire or the personal bias of an interviewer. Caution the students to examine data for reasonableness before beginning an analysis.

II.	Organizing Numerical Data	Explain that even the most carefully gathered data must be organized before it can be analyzed. At this point, introduce frequency distributions of data, the range of these distributions, and whether the data will be grouped or ungrouped.
III.	Analyzing Numerical Data	In an earlier lesson we analyzed data by using ratios and percentages. Now, we will use averages, deviations, and time series analysis.
	A. Mean, mode, median	To start with, present only the three most frequently used measures of central tendency: the *mean*, the *mode*, and the *median*. Define them and explain how to compute them.
	B. Other terms	Also define *percentile*, *decile*, and *quartile*. Then present the formulas for computing *standard deviation* and the *average* (or *mean*) *deviation*.
	C. Meaning of terms	After each presentation of a measure of central tendency or dispersion, discuss the meaning of the measure. Then give an actual example of each and discuss the conclusions that can be drawn from it.

References:

McElroy, Chaps. 1, 2, 4, and 5.
Question 11, p. 82; Question 22, p. 84; Question 22, p. 110.

Smith, Chaps. 1, 2, 3, 4, and 5.
Exer. 1, p. 17; Exers. 1, 2, 3, 4-6, (sic), p. 32; Exers. 1, 2, 3, 4, 5, and 6, p. 49.

Lesson 10
Other Tools for Presenting and Analyzing Numerical Data

OBJECTIVES

After completing this lesson the student should be able to:
Analyze numerical data by the use of index numbers,
Use time series analysis, and
Construct simple charts and graphs to present the results of his analyses.

CONTENT OUTLINE	TEACHING SUGGESTIONS AND REFERENCES
I. Index Numbers	Index numbers are important tools for business and economic analysis. Explain the three main types of indexes.
A. Price indexes	Explain the two most common price indexes, the Consumer Price Index and the Wholesale Price Index.
B. Physical volume or quantity indexes	Here present the Index of Industrial Production and the Index of Freight Car Loadings, both published by the Federal Reserve Board.
C. Dollar value indexes	As examples of dollar value indexes, explain the Index of Department Store Sales and the Restaurant Sales Index.
II. Time Series Analysis	Present time series last. You will not have time to do an indepth presentation, but you should explain briefly

the procedure for analyzing secular trends, seasonal variation and cyclical variation. Then make it clear that there are some variations known as *irregular variations* that cannot be analyzed.

A. Charts, etc.

Finally, explain how to present statistical analyses by the use of line charts (or graphs), bar charts, pie charts, and pictographs.

References:

McElroy, Chaps. 3, 10, 11, 12, and 13. Question 11, p. 239; Question 15, p. 240; Question 21, p. 242.

Federal Reserve Bulletin.

Survey of Current Business.

How Secretaries Prepare for the CPS Examination

An informal survey was made several years ago by Dr. Donald Mulkerne, Professor of Business Education at the State University of New York at Albany, to learn how secretaries prepared for the CPS examination. Dr. Mulkerne made a one-page questionnaire and sent it to a number of people who had successfully completed the examination.

The study shows that all of those surveyed, regardless of educational level, felt that some kind of review is necessary. Most of them stated that a concentrated review with others preparing to take the examination was most beneficial. Most also agreed that there is no substitute for on-the-job experience in administrative secretarial work, but that study of subject content and related information is also very helpful.

Many who had completed the CPS examination successfully felt that the attitude and mind set of a person taking the examination were important in preparing for it. They held the opinion that more secretaries should take it with a positive attitude—with the idea of passing all parts the first time. While some fail one or more parts, this happens in all professional examinations and is no reason for discouragement. The wide range of knowledge and the broad competences covered in the examination show clearly that it is a professional examination. Even the best professionals have some area of weakness which they can improve upon when preparing for the exam the second time.

Many of those surveyed stated that a relaxed attitude and a calm outlook are very helpful. They suggested that the examinee should read each question carefully, determine exactly what is being asked for, and concentrate on the answer. They agreed also that common sense must be applied in reading and answering the questions.

Many of those surveyed found that it was best to set aside a definite time for study and to use it. Also, that they could study best early in the morning when it was quiet. The candidate should be aware, they pointed out, that those who have been away from studying for a few years will very likely have to relearn the discipline and technique of studying.

Many successful candidates followed the CPS bibliography and the Study Guide in deciding what to study. They also found that reading *The Secretary* and at least one book on each subject was good preparation. They agreed on the importance of reading current news, including business news, and reading it systematically.

Many kept a CPS notebook in which they recorded information for the examination, with a separate section for each part so the information would be classified and in a good order for quick review.

Many agreed that preparing for the examination was a real challenge for them. They also agreed that it was a very stimulating experience and helped them on the job whether they passed it or not.

Bibliography

BEST COPY AVAILABLE

BOOKS

1. Anthony, Robert N. *Management accounting principles.* Homewood, Ill. Dow Jones-Irwin. 1970.

2. Gentry, James A. and Johnson, Glenn L. *Finney and Miller's principles of accounting, introductory;* 7th ed. Englewood Cliffs, N.J. Prentice-Hall. 1970.

3. Horngren, Charles T. *Accounting for management control;* 2d ed. Englewood Cliffs, N.J. Prentice-Hall. 1970.

4. Keeling, B. Lewis and Pendery, John A. *Payroll records and accounting.* Cincinnati, Ohio. South-Western Publishing Co. 1972.

5. McElroy, Elam E. *Applied business statistics: An elementary approach.* San Francisco, Calif. Holden-Day. 1971.

6. Meigs, W. and others. *Financial accounting.* New York, N.Y. McGraw-Hill. 1970.

7. Moore, Carl L. and Jaedicke, Robert J. *Managerial accounting.* Cincinnati, Ohio. South-Western Publishing Co. 1972.

8. Niswonger, C. Rollin, and Fess, Philip E. *Accounting principles;* 11th ed. Cincinnati, Ohio. South-Western Publishing Co. 1973.

9. Pyle, William W. and White, John A. *Fundamental accounting principles;* 6th ed. Homewood, Ill. Richard D. Irwin Co. 1972.

10. Smith, M.G. *A simplified guide to statistics for education and psychology;* 4th ed. New York, N.Y. Holt, Rinehart, and Winston. 1970. Paper.

PERIODICALS

1. *Federal Reserve Bulletin.* (Monthly)

2. *Survey of Current Business.* (Monthly)

3. *The Secretary.* Published monthly, except in July and August, by the National Secretaries Association (International), 2440 Pershing Road, Kansas City, Mo. 64108.